INSTRUMENTATION

MICRON IN-LINE & TEE FILTERS

VFI & VFT Series

www.korlokusa.com

Kor-Lok USA

Features

Traps undesirable materials for protection of system components from fluid particles as well as contaminants

Replaceable sintered 316SS filter element with micron filtering ranges - 0.5, 2, 7, 15, 60 & 90 microns

Compact body design

Wide choices of port sizes and end connections

Materials of Construction

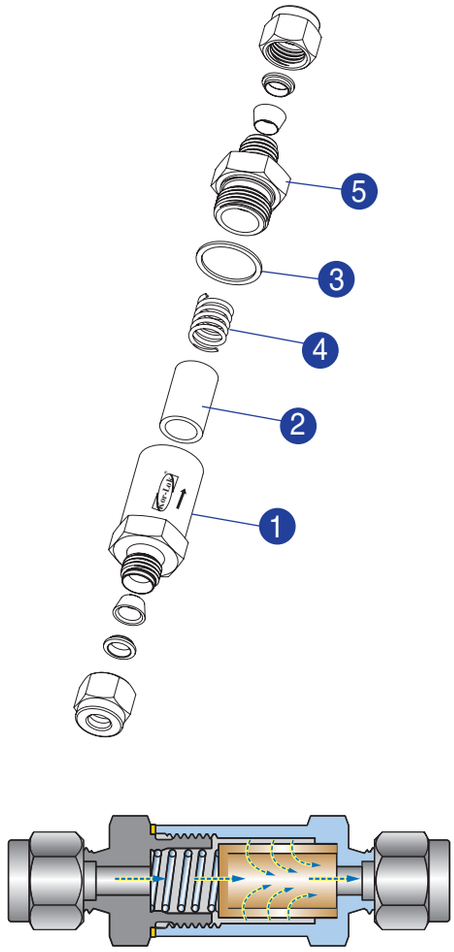
No.	Description	Materials	
	Series	FT- T	FI - Inline
1	Body	316SS	
2	Sintered Filter	316SS	
3	Gasket	316SS plated with silver	
4	Spring	302SS	
5	Outlet Body	-	316SS
6	Bonnet	316SS	-
7	Nut	316SS	-

VFI series
In-line Filters

Maximum working pressure up to 3000psig (206bar) at 100˚F(37˚C)

For limited space and when filter element don't have to be replaced often

Compact design with broaden filtration ranges



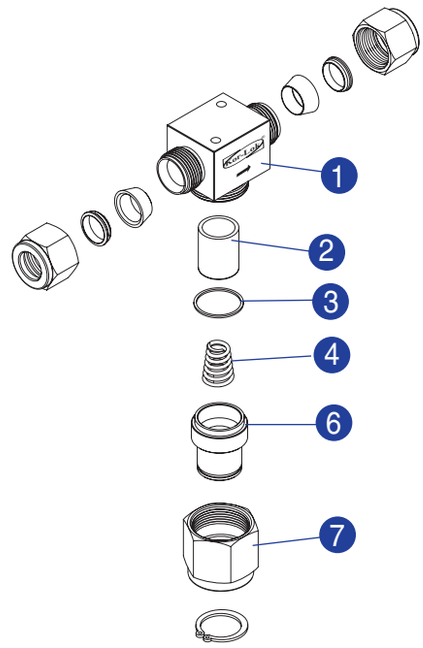
VFT series
T Filters

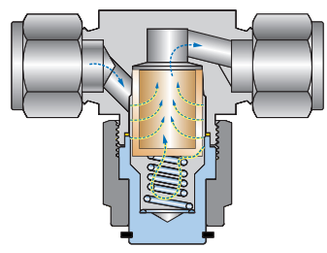
Maximum working pressure up to 6000psig (413bar) at 100˚F(37˚C)

Easy replacement of filter element on-line

Union bonnet design for safe high pressure application

Bypass option for sampling or purging of process fluid





Definitions

Filter Element

Made of sintered stainless steel, porous with lots of tiny holes

Traps media contamination which is bigger than the porous in the filter element

Filtration Area

Actual surface area of the filter element to trap media contamination

Micron

Pore diameter of filter element or particle diameter of media contamination
1 micron = 0.001mm or 0.00004 inch

Cleaning

Kor-Lok filters are free from machine oils, loose particles and grease throughout the close cleaning process.

The special cleaning for high purity application is available upon request.

Testing

Every VF series filter is 100% factory tested with air and nitrogen at 1000psig (69bar) to a requirement of no detectable leakage.

Important Notification

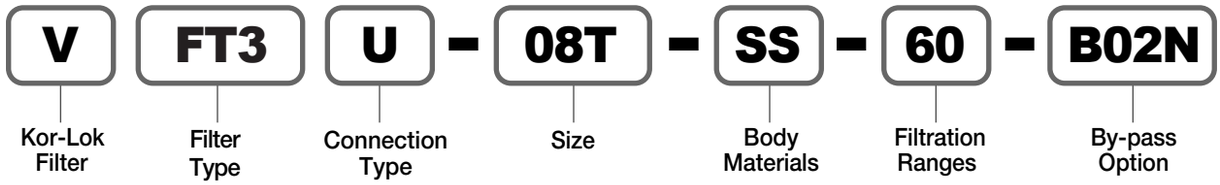
Proper installation, materials compatibility, operation and maintenance of these filters are the responsibility of the user. The total system design must be taken into consideration to ensure optimal performance and safety.

When undesirable contaminants are trapped by filter element, the system pressure build up occurs. It comes earlier when the flow volume is high and the media is not clean. In this case, the filter elements need to be replaced and clean metal components when replacement for minimal pressure drop as well as system purity.

How To Order

Kor-Lok VF series filters are ordered by part number as shown as below.

Example : The following part number, **VFT3U-08T-SS -60-B02N** is designated for FT series filter with both 1/2″ Kor-Lok tube fittings, 316SS, 60 micron filter element, 1/8″ Female NPT by-pass option.



Filter Type	
FI	In-line Filter
FT	T Filter

Connection Type	
U	Kor-Lok Tube Fitting
F	Female NPT or ISO7/1(PT)
M	Male NPT or ISO7/1(PT)

Body Materials	
SS	316SS
BS	Brass

Connection Type					
Fractional(Inch) Tube O.D. Designation					
Tube O.D.	inch	1/8	1/4	3/8	1/2
	mm	3.17	6.35	9.52	12.70
Designator		02T	04T	06T	08T

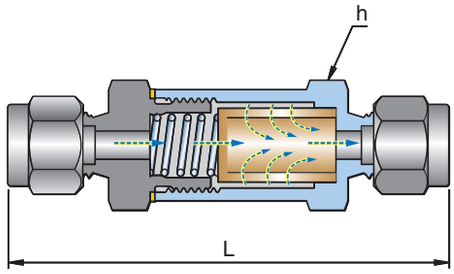
Metric Tube O.D. Designation						
Tube O.D.	mm	3	6	8	10	12
Designator		M03T	M06T	M08T	M10T	M12T

Pipe Size Designation (NPT or ISO7/1-PT)				
Pipe Size	1/8	1/4	3/8	1/2
Designator	02N/R	04N/R	06N/R	08N/R

Filtration Ranges	
Designator	Norminal Micron
05	0.5
2	2
7	7
15	15
60	60
90	90

By-pass Option	
None	None
B02N	By-pass with Female 1/8"NPT
B04N	By-pass with Female 1/4"NPT

VFI series
(In-line Filters)



Maximum working pressure up to 3000psig (206bar) at 100˚F(37˚C)

For limited space and when filter element don't have to be replaced often

Compact design with broaden filtration ranges

Ordering Information & Dimensions

Part Number		End Connection		Orifice (mm)	Dimensions (mm)	
		Inlet	Outlet		L	h
VFI1	U-02T-	1/8" Kor-Lok		2.4	59.7	14.3
	U-M03T-	3mm Kor-Lok			60.5	
	F-02N-	1/8" Female NPT			54.9	
VFI2	U-04T-	1/4" Kor-Lok		4.7	74.9	19.0
	U-M06T-	6mm Kor-Lok			75.2	
	F-04N-	1/4" Female NPT			72.9	
	M-04N-	1/4" Male NPT			68.3	
VFI3	U-06T-	3/8" Kor-Lok		7.1	81.8	25.4
	F-06N-	3/8" Female NPT			77.2	
	M-06N-	3/8" Male NPT			71.6	
VFI4	U-08T-	1/2" Kor-Lok		10.3	86.9	
	U-M10T-	10mm Kor-Lok			82.2	

ISO7/1 Tapered Threads (PT) are available for all fractional sizes of VFI series filters. Add "R" as a suffix instead of "N"

Effective Filtration Area

Series	Effective Filtration Area	
	sq. inch	sq. meter
VFI1	0.55	0.00035
VFI2	1.30	0.00083
VFI3, VFI4	2.00	0.00128

Filter Elements & Ordering Designator

The elements can trap 95% of undesirable particles larger than the nominal pore size.

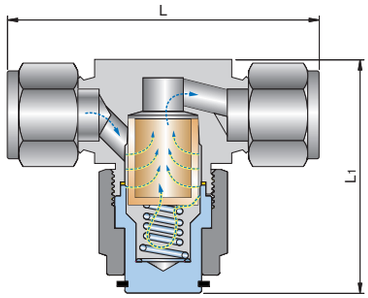
Ordering Designator	Norminal Pore Size (㎛)	Pore Size Range (㎛)
05	0.5	0.5 ~ 2
2	2	1 ~ 4
7	7	5 ~ 10
15	15	11 ~ 25
60	60	50 ~ 75
90	90	75 ~ 100

Technical Data

Series	Max Working Pressure at 100˚ F(37˚ C)				Working Temperature Rating	
	316SS		Brass		316SS	Brass
	psig	bar	psig	bar		
VFI1	3000	206	3000	206	-20 ~ 900˚F -28 ~ 482˚C	-20 ~ 300˚F -28 ~ 148˚C
VFI2	3000	206	3000	206		
VFI3, VFI4	2500	172	2000	137		

Dimensions are for reference only and are subject to change without prior notice.

VFT series
(T Filters)



Maximum working pressure up to 6000psig (413bar) at 100˚F(37˚C)

Easy replacement of filter element on-line

Union bonnet design for safe high pressure application

Bypass option for sampling or purging of process fluid

Ordering Information & Dimensions

Part Number		End Connection		Orifice (mm)	Dimensions (mm)	
		Inlet	Outlet		L	L_1
VFT1	U-02T-	1/8" Kor-Lok		4.4	57.7	47.5
	U-04T-	1/4" Kor-Lok			62.7	
	U-M06T-	6mm Kor-Lok			62.5	
	F-02N-	1/8" Female NPT			50.8	
	F-04N-	1/4" Female NPT			54.1	
	M-04N-	1/4" Male NPT			54.1	
VFT2	U-06T-	3/8" Kor-Lok		5.4	72.1	56.0
	U-M08T-	8mm Kor-Lok			72.1	
VFT3	U-08T-	1/2" Kor-Lok		6.4	77.2	56.0
	U-M10T-	10mm Kor-Lok			72.6	
	U-M12T-	12mm Kor-Lok			77.2	
	M-06N-	3/8" Male NPT			60.5	
	M-08N-	1/2" Male NPT			69.9	

ISO7/1 Tapered Threads (PT) are available for all fractional sizes of VFT series filters. Add “R” as a suffix instead of “N”.

Filter Elements & Ordering Designator

The elements can trap 95% of undesirable particles larger than the nominal pore size.

Ordering Designator	Norminal Pore Size (㎛)	Pore Size Range (㎛)
05	0.5	0.5 ~ 2
2	2	1 ~ 4
7	7	5 ~ 10
15	15	11 ~ 25
60	60	50 ~ 75
90	90	75 ~ 100

Technical Data

Series	Max Working Pressure at 100˚F(37˚C)				Working Temperature Rating	
	316SS		Brass		316SS	Brass
	psig	bar	psig	bar		
VFT1, VFT2	6000	413	2000	137	-20 ~ 900˚F -28 ~ 482˚C	-20 ~ 300˚F -28 ~ 148˚C
VFT3						

Dimensions are for reference only and are subject to change without prior notice.

Flow Data at 70°F(21°C)

VFI series In-line Filters

Norminal Element Pore Size (ß≠)	Inlet Pressure psig/bar									Pressure Drop psig/bar								
	5psig/0.34bar			10psig/0.68bar			15psig/1.00bar			10psig/0.68bar			50psig/3.40bar			100psig/6.80bar		
	1/8 3mm	1/4 6mm	3/8,1/2 10,12mm	1/8 3mm	1/4 6mm	3/8,1/2 10,12mm	1/8 3mm	1/4 6mm	3/8,1/2 10,12mm	1/8 3mm	1/4 6mm	3/8,1/2 10,12mm	1/8 3mm	1/4 6mm	3/8,1/2 10,12mm	1/8 3mm	1/4 6mm	3/8,1/2 10,12mm
	Air Flow, L/min									Water Flow, L/min								
0.5	1.1	3.4	10	1.7	7.3	24	3.4	13	45	0.03	0.15	0.34	0.15	0.64	1.5	0.45	1.0	2.8
2	5.6	17	39	11	39	79	17	65	110	0.30	0.90	0.98	0.91	3.2	4.1	1.5	4.9	6.0
7	14	39	51	25	82	119	34	130	190	0.37	1.5	2.4	1.1	4.9	8.3	1.8	7.5	13
15	22	34	51	36	82	130	42	130	220	0.45	1.8	3.1	1.3	4.9	9.8	2.1	7.9	15
60	48	87	140	62	160	280	68	240	420	0.56	3.4	7.5	1.8	12	25	2.6	17	37
90	51	110	170	62	210	310	73	280	450	0.75	4.5	8.7	1.8	15	28	2.2	23	41

VFT series T Filters

Norminal Element Pore Size (ß≠)	Inlet Pressure psig/bar									Pressure Drop psig/bar								
	5psig/0.34bar			10psig/0.68bar			15psig/1.00bar			10psig/0.68bar			50psig/3.40bar			100psig/6.80bar		
	1/8 3mm	1/4 6mm	3/8,1/2 10,12mm	1/8 3mm	1/4 6mm	3/8,1/2 10,12mm	1/8 3mm	1/4 6mm	3/8,1/2 10,12mm	1/8 3mm	1/4 6mm	3/8,1/2 10,12mm	1/8 3mm	1/4 6mm	3/8,1/2 10,12mm	1/8 3mm	1/4 6mm	3/8,1/2 10,12mm
	Air Flow, L/min									Water Flow, L/min								
0.5	1.1	3.4	10	1.7	7.3	24	3.4	13	45	0.15	0.15	0.34	0.64	0.64	1.5	1.0	1.0	2.8
2	5.6	17	39	11	39	79	17	65	110	0.30	0.90	0.98	0.90	3.2	4.1	1.5	4.9	6.0
7	14	39	51	25	82	119	34	130	190	0.37	1.5	2.4	1.1	4.9	8.3	1.8	7.5	13
15	22	34	51	36	82	130	42	130	220	0.45	1.8	3.1	1.3	4.9	9.8	2.1	7.9	15
60	48	87	140	62	160	280	68	240	420	0.56	3.0	5.6	1.8	10	18	2.6	14	25
90	51	110	170	62	210	310	73	280	450	0.75	4.1	6.4	1.8	12	20	2.2	18	28

Kor-Lok Line up

Instrumentation

Fittings

- Tube Fittings
- PTFE Fittings
- Hose & Push-On Connectors
- Precision Pipe Fittings
- Fusible Connectors
- Dielectric Fittings

Valves

· VB1 series	Precision & Clean Ball Valves
· VB2 series	Swing-Out Ball Valves
· VB3 series	Instrumentation Ball Valves
· VB6B series	High Pressure Bar Stock Ball Valves
· VB6F series	High Pressure Forged Ball Valves
· VB6T series	Trunnion Ball Valves
· VP series	Plug Valves
· VN5 series	Integral Bonnet Forged Needle Valves
· VN6 series	High Pressure Bar Stock Needle Valves
· VU6 series	Union Bonnet Valves
· VMT series	Metering Valves
· VM series	Instrumentation Manifolds Valves
· VG series	Gauge & Gauge Root Valves
· VL series	Bleed Valves
· VD series	Double Block and Bleed Valves
· VC series	General & High Pressure Relief Valves
· VR series	Low & High Pressure Relief Valves
· VE series	Industrial Excess Flow Valves
· VF series	T & In-Line Filters
· VPR series	Pressure Reducing Valves
· VBR series	Back Pressure Regulators

Others

- Seamless & Welded Tubing
- Condensate Pots

UHP(Ultra High Purity)

Fittings

- Weld & Metal Face Seal Fittings
- Pipe &Tube Fittings
- Flanges
- Cylinder Connectors

Valves

· VCD series	Diaphragm Valves
· VCB series	Bellows Valves
· VCC series	Welded Check Valves

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